









10. (Currently amended) The method according to claim 1, wherein the adapter is a single-stranded oligonucleotide comprising between 4 and 120 ~~preferably between 8 and 30~~ nucleotides.

11. (Original) The method according to claim 1, wherein the adapter is linked to said third strand oligonucleotide through a spacer.

12. (Currently amended) The method according to claim 1, wherein the spacer comprises a hydrocarbon skeleton ~~optionally interrupted or substituted by one or more heteroatoms, or heterogroups that comprise at least one of these heteroatoms.~~

13. (Original) The method according to claim 11, wherein the spacer comprises a polyethyleneglycol chain or a mixed structure comprising polyethyleneglycol units and (oligo) nucleotide units.

14. (Currently amended) The method according to claim 11, wherein the spacer is a ~~hexaethyleglycol~~ hexaethyleneglycol chain.

15. (Original) The method according to claim 1, wherein the native nucleic acid contains a mutation that is corrected by the homologous recombination.

16. (Original) The method according to claim 15, wherein the mutation is selected from the group consisting of base changes, deletions, insertions, nucleotide repeats, and combinations thereof.

17. (Original) The method according to claim 1, wherein the homologous recombination causes an alteration in the native nucleic acid sequence.

18. (Original) The method according to claim 17, wherein the alteration is caused in a segment selected from the group consisting of a gene, a part of a gene, a gene control region, an intron, a splice junction, a transposable element, a site specific recombination sequence, and combinations thereof.

19. (Original) The method according to claim 1, wherein the native nucleic acid is chromosomal.

20. (Original) The method according to claim 1, wherein the native nucleic acid is extrachromosomal.

21. (Original) The method according to claim 15, wherein the native nucleic acid is selected from the group consisting of mitochondrial DNA, episomal DNA, a plasmid and chloroplast DNA.

22. (Withdrawn) A kit comprising:

(i) a third strand oligonucleotide which comprises a base sequence capable of forming a triple helix at a binding region on one or both strands of a native nucleic acid segment;

(ii) a donor nucleic acid, comprising a nucleic acid sequence substantially homologous to the native nucleic acid segment so that the donor sequence is capable of undergoing homologous recombination with the native sequence at the target region; and

(iii) an adapter segment comprising an oligonucleotide sequence able to bind at least a portion of said donor nucleic acid through Watson-Crick base pairing, the adapter segment being linked to said third strand oligonucleotide.

23. (Original) A method for effecting gene alteration or mutation repair at a specific-sequence site on a native DNA, comprising:

a) introducing into a cell a nucleic acid targeting system comprising:

(i) a third strand oligonucleotide which comprises a base sequence capable of forming a triple helix at a binding region on one or both strands of a native nucleic acid segment,

